

**"A test of a simple semi-classical model
of intense field ionization in the tunneling limit"**

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In the high-intensity tunneling limit, elastic rescattering of the ionized "free" electron by its parent ion core leaves a distinct signature on its energy and angular probability distributions. We show the dynamics of the ionization and laser-driven rescattering processes that occur in this regime can be accurately reproduced using a simple semi-classical model. Predictions from this model will be compared with recent high-precision measurements of short pulse, high intensity photoelectron spectra from helium.¹ This work was performed in part under the auspices of the U.S. Department of Energy at the Lawrence Livermore National Laboratory under contract No. W-7405-Eng-48 and in part at the Brookhaven National Laboratory under contract No. DE-AC02-76CH00016 with the U.S. Department of Energy and supported by its Division of Chemical Sciences, Office of Basic Energy Sciences.

¹B. Walker, B. Sheehy, K.C. Kulander and L.F. DiMauro, Phys. Rev. Lett. **77** 5031 (1996)